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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/618,536      | 07/18/2000  | Gregory S. Bayley    | TRW(AP)4566         | 8672             |

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EXAMINER

ILAN, RUTH

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3616

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/618,536

Applicant(s)

BAYLEY ET AL.

Examiner

Ruth Ilan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 5, 7, 8, 11, 13, 21 and 22 is/are allowed.
- 6) ☐ Claim(s) 1, 3, 14-20, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 16, 2003 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 14-20, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Based on the disclosure and the Applicant's Remarks of Paper No. 13, it appears that the limitation in claim 1 that is "said inflation fluid source comprising means for inflating said inflatable vehicle occupant protection device to a pressure that is a defined mathematical function of said thickness of said inflatable vehicle occupant protection device..." is really directed to a method of designing an air bag/inflator system, and as such the claim is in a sense a hybrid claim directed to a method of designing an air bag, and not the apparatus itself. For the purposes of examination, and based on Applicant's arguments of paper No. 6, which are addressed below, it will be assumed that the apparatus is being claimed.

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3, and 14-20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cherry (US 6,022,044) in view of Bohman et al. (Paper no. 98-S8-O-07, 16<sup>th</sup> ESV Conference June 1-4, 1998 Windsor Canada) Cherry is an inflatable vehicle occupant protection device that meets the structural limitations as recited in these claims. Cherry additionally discloses that the intended purpose of the air bag is to protect an occupant in the event of a side impact or rollover event. Cherry is silent as to the specific thickness/pressure/head velocity relationship. Bohman et al. teaches that it is known in the art to inflate an air bag of the type disclosed by Cherry to a predetermined thickness (70mm) and a predetermined pressure (1.5 bar) which is sufficient to prevent the head of an occupant traveling at a predetermined velocity (7 m/s) from striking the side structure through the air bag (bottoming out, as taught in examiner numbered page 6, 1<sup>st</sup> col. Lines 1-5.) Please note that the limitation "said inflation fluid source comprising means for inflating said inflatable vehicle occupant protection device to a pressure that is a defined mathematical function of said thickness of said inflatable vehicle occupant protection device..." in claim 1 has been given little patentable weight, since the claims are apparatus claims and are not directed to the method of supplying or determining the pressure or design. It is the Examiner's position that Bohman et al. teaches a relationship between pressure and thickness, and that the

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method of deriving that relationship is not germane to the issue of patentability of an apparatus claim. Additionally, Bohman et al. teaches that such predetermined criteria are useful when avoiding bottoming out or strikethrough of the air bag. It would have been obvious to one having ordinary skill in the art at the time of the invention to inflate the air bag of Cherry to the thickness and pressure of Bohman et al. in order to avoid bottoming out, as taught by Bohman et al. and to provide a safe side air bag device.

Regarding claim 3, the air bag criteria of Bohman et al. indicate that the air bag thickness is 70 mm, rather than 120-150 mm. The Examiner takes Official Notice that it is known in the art that based on fundamental concepts of momentum, the thicker a side curtain of a given pressure is, the safer it will be for the occupant during impact. It would have been obvious to one having ordinary skill in the art at the time of the invention to make the air bag of Cherry in view of Bohman et al. thicker, in order to provide a safer system during impact.

#### ***Allowable Subject Matter***

3. Claims 2, 5, 7, 8, 11, 13, 21 and 22 are allowed.

#### ***Response to Arguments***

4. Applicant's arguments with regard to the 112<sup>2nd</sup> paragraph issues have been considered but they are only partially persuasive. Regarding the issue of specific pressure when inflated, the Examiner is convinced. However, it is the Examiner's position that the limitation "said inflation fluid source comprising means for inflating said inflatable vehicle occupant protection device to a pressure that is a defined

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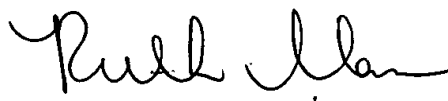
mathematical function of said thickness of said inflatable vehicle occupant protection device..." is directed to a method of designing the combination of the air bag and inflator. The Applicant indicates that the instant case differs from the prior art because the prior art uses empirical data to determine working characteristics (the method of designing the prior art air bag is based on empirical data) The method of designing the instant air bag is based on computer modeling, which is old and well known, especially for engineering that relies on momentum equations for success. Curve fitting is also old and well known. However, the patentability of these limitations is not important in the instant application, because the claims are apparatus claims, and the manner in which the system was designed is not important. The Examiner notes with interest that the Applicant's arguments with regard to the prior art are directed to the manner in which the prior art design process differs from the instant process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth Ilan whose telephone number is 703-306-5956. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Ruth Ilan  
Examiner  
Art Unit 3616

  
6/2/03

RI  
June 2, 2003